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ABSTRACT

In this publication a brief history of the Scottish Council for Research in Education is followed by reports on educational research projects completed in 1979 by members and allied associations. (JD)

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THE SCOTTISH COUNCIL FOR RESEARCH IN EDUCATION

FIFTY-FIRST ANNUAL REPORT

1978-79

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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THE SCOTTISH COUNCIL FOR RESEARCH IN EDUCATION

Fifty-first Annual Report 1978-79

COUNCIL (Chairman—Mr Hugh Fairlie)

Chairman's Report

1978 was a milestone for the Scottish Council for Research in Education, the year in which was celebrated the fiftieth anniversary of its foundation. It was marked by jubilee celebrations, when tributes were paid to the Council's outstanding record of achievement, and to the contribution which it had made to educational research and development at home and abroad. Now we look forward to the next fifty years.

The beginning of the year was marked by a number of changes in membership to a degree larger than has been normal. This was occasioned by a revision of the Constitution in 1972 to the effect that no individual might serve for more than six years consecutively. As a result, six years on, we lost many members who had each made a valuable contribution to the work of the Council. Among those who retired, particular reference must be made to Professor John D Nisbet, who first became a member in 1960 and who served with distinction as Chairman from 1975 until 1978; to Professor Arnold Morrison, a member from 1970 and Chairman of the Communications Committee from 1975; and to Mr Scott Charles, Chairman of the Finance and General Purposes Committee from 1972. The Council would wish to record its gratitude to them and to those other members who retired in 1978.

The first Fellowship awarded by the Council was presented in September 1978 to Philip E Vernon, Emeritus Professor of Educational Psychology in the London University Institute of

Education and latterly Professor of Educational Psychology in the University of Calgary. This is an honour which is restricted in its award to Scots or to those who have worked in Scotland. Professor Vernon taught in the country between 1935 and the mid 1940's, and to those who knew him then, to those who know his work, and to all who have come under his influence, his choice must have come as no surprise, and indeed as one which commanded universal acclaim. On the occasion of receiving his award, Professor Vernon delivered an important address on the subject "Intelligence Testing, 1928-78: What next?", which has since been published by the Council.

The Council continues to receive visitors from many parts of the world, and in the course of the year, these came from places as far removed as India, Indonesia, Australia, Israel, Mauritius and Holland. Our guest from Israel, Professor Lewy, spent a month working with officials of the Council as a consultant and made his own considerable contribution to their work and their discussions. But, in addition to receiving visitors, we also take ourselves out from Moray Place. A successful Conference was held in London in December 1978 on "Research in the Service of Education", when a number of papers were presented by the staff of the Council to mark our Jubilee year. These papers are now available in a published booklet. A colloquium on "Assessment within Schools" for an invited audience of local authority Advisers and staff of Colleges of Education, was held in April of this year. This was followed by a Conference for teachers on the same subject in May, in Edinburgh. The Council has agreed that similar conferences should be promoted in other areas of Scotland. In this connection it is fitting that reference should be made to the significant contribution that the staff of the Council has been making in recent years to the inservice training of teachers.

Several research projects have been completed in the course of the year and have either been published or are in preparation for publication, while agreement has been reached on new projects to be undertaken. Among these topics covered are: assessing the affective development of pupils ("Assessment in the Affective Domain"), testing to inform teachers and pupils ("Diagnostic Assessment" Stage II), and the role of writing in the various subjects of the curriculum ("Writing Across the Curriculum"). A contract has been negotiated for a study entitled "Student Choice in HND Courses" to begin in September 1979, and work on an extension to the existing project "Awareness of Opportunity" has already begun. In this connection it is worth recording the

considerable success of the Council in securing research contracts from the SSRC. No fewer than five of the current undertakings of the Council are funded from this source.

It was in the mid 60's that the Council began to employ a team of professional full-time staff and now in addition to "in-house" funded research projects the Council undertakes work which is dependent upon research grants or is specifically based upon a "contract" with a "customer". The Scottish Education Department continues to provide finance for projects commissioned on its behalf, while an example of contract research is also to be seen in the work recently completed for the Scottish Certificate of Education Examination Board on alternative means of assessing ordinary grade English.

It is also from the Scottish Education Department that comes by far the greatest financial support for the Council through a grant sufficient to cover basic costs and overheads, thus enabling the Council to conduct a continuous and substantial programme of research. The Council is indebted to the Department and to its officers for their continued interest and support and for their readiness to make annual revision of that grant to take account of the financial problems created by inflation.

In the area of contract research, this year might well be one of major significance for the Council in that we have agreed to extend our activities into the international field. At the invitation of the British Council, we have submitted a bid to undertake on their behalf, and that of the Government of Pakistan, a Primary Education Project in that country and while a contract has not yet been signed, we have every reason to believe that the formalities will be completed in the near future. The task will be of considerable magnitude and will involve the training of Pakistani research workers both in their own country and in Scotland in the design of the investigation, the construction and administration of tests, and, finally, the analysis of data. The undertaking will extend to 2-3 years and the cost will be of the order of £300,000. This is an exciting and challenging development to the work of the Council which, if successful, could further enhance the reputation of Scotland and of the Council, in particular in the international educational scene.

Finally, and in no small measure thanks to the good offices of the Scottish Education Department, considerable progress has been made towards the removal by the Council from Moray Place to the Charteris Building of Moray House College of Education. The Council has agreed in principle to the removal, and to the terms

and conditions which have been negotiated. Provided that satisfactory financial arrangements can be established to cover the provision of furniture and furnishings appropriate to the needs of the Council, the Annual Report for our fifty-second year might well be written at that address.

SCRE FELLOWSHIP

awarded at the 50th Anniversary meeting in Edinburgh, September 1978, to

PHILIP E VERNON

the Council's unhesitating choice as the first to receive its senior honour.

Although Philip Vernon left Glasgow in the mid-1940s, he has continued to be an influential figure in Scotland, as well as in the United States, England, and Canada. His contributions to educational and psychological research have been specially related to the measurement of human abilities and personality, and the study of their relationship to upbringing and environment. From the outset of his career, Vernon has been expressing views (backed by evidence from well designed and exact studies) on a variety of topics, ranging from intelligence tests to his mature work on the causes of backwardness of many societies. The very practical and humane nature of the problems to which his attention has been directed makes his name well known to those concerned with the day to day business of education.

REPORTS OF COMMITTEES

Finance and General Purposes Committee
(Chairman—Professor J C Shaw)

For an organisation such as SCRE perhaps the most significant indication of the scale of its activities is given by the Statement of Source and Application of funds. This shows, or should show, the movement of cash funds through the organisation in pursuit of its objectives.

The statement, on page 40 shows that the total cash resources available to and applied by the Council during the year ended 31st March 1979 were just over £334,300 which was almost exactly the same as the figure for the preceding year. Superficially this would appear to indicate a satisfactory state of affairs in maintaining the level of resources available to the Council. Closer observation and consideration discloses that this is not so and provides evidence confirming a reduction in resources and thus in activities.

First of all, about £30,000 of the cash available during 1978/79 was earmarked for specific, non-recurring, requirements—namely the provision of equipment and completion of arrangements to provide proper pensions for senior staff. For general, recurrent, on-going, research projects, the cash funds available to the Council fell by roughly 10% between 1977/78 and 1978/79.

This reduction is of course aggravated by the impact of inflation. We all know that every £1 available to us during 1978/79 bought less than during 1977/78. A very rough indication of the impact of inflation between the two years is 11%. Very crudely therefore the funds available for the Council's continuing research activities fell in total by over 20% comparing "real terms" year on year.

This is reflected very clearly in the Income and Expenditure Account (page 41) where the total expenditure on all projects is shown as reduced from £230,200 in 1977/78 to £207,500 in 1978/79—a reduction of 10%, which is the same as the non-inflation adjusted reduction in total funds available. The total "real" inflation-adjusted change is greater. General Expenditure which is detailed in Note 4 (page 46), has inevitably increased reflecting principally the impact of inflation. Salaries of Administrative and Directing staff are a major component of these costs (after appropriate allocations of a non-recoverable proportion to specific projects) and these have risen in line with Government guidelines and limits. Detailed study of Note 4 (page

46) indicates the success of the management group of the Council in minimising the impact of increased costs.

Nearly all "controllable costs" have been kept well within limits commensurate with efficient operation. Indeed, close study of the items detailed in Note 4 highlights how few of these costs are directly controllable! The final result as shown in the Income and Expenditure Account is a deficit of approximately £3,600. This however has been struck without making transfers from general funds either to Maintenance Fund or to Publications Fund. Having regard to the projected move to Charteris House it was thought that any costs of maintenance incurred on vacating Moray Place in excess of the existing Maintenance Fund (£6,500) should fall against the income of 1979/80. Publications seemed to have gone well during 1978/79 resulting in a net income to the Publications Fund (now standing at over £15,000) and no further transfer was needed. Had such transfers been made the operating deficit for 1978/79 would have been about £9,000—rather more than budgetted but not seriously so. More disappointing is the down turn of about £13,000 as compared with the surplus on a comparable basis achieved in the previous year.

Reference above to General Expenditure highlights dramatically the importance to the Council of changes in its total income. In very round figures it now requires about £100,000 per annum to provide the basic accommodation, equipment, direction and administration which enables the Council to function—£100,000 per annum just to "open for business". Related to the 1978/79 total operating funds of £300,000 this means that if we could increase that by, say, one third (or £100,000) we would increase the funds directly available for research by one half (from £200,000 to £300,000). Conversely, a reduction in total funds available is more than proportionately serious in its impact on the funding of research projects. It is essential that the Council maintain its efforts to preserve and enhance the level of total funds available to it.

The Scottish Education Department has met, and has committed itself to meeting in future, inflationary increases in costs of operations related to 1974 levels as far as Parliamentary approval of departmental estimates will allow. Not all contributors to the costs of the Council's activities have done this and many grants received are at the monetary levels of some years ago.

Looking to the future, a period of stringent "cash-limit" budgetting, and the application to publically-supported bodies like the Council of the same level of cost and personnel economies as sought in the Government service, it is likely that severe pressure

will continue on the Council's income and thus its activities. Any move of premises which may in the long run result in cash savings at National Government level will not help the Council directly.

It is against this background that "external" funding of specific projects (including those directly financed by SED) is so important. For example, if the Pakistan Project referred to on page 11 were to be successfully initiated by the Council this could have a very important effect on its financing and its total activities.

Turning to the Balance Sheet (page 40) it will be noted that the Council was temporarily in overdraft at the year end. This is not a satisfactory situation and although an organisation like the Council has problems from time to time in financing working capital—notably in the form of expenditure on researchers' salaries—awaiting recovery from sponsors, it should now have adequate resources for this. Stringent steps have been taken to tighten up the administration of cash balances and to ensure the elimination of the need to rely on bank overdraft.

Communications Committee
(Chairman—Professor N D C Grant)

The increased volume of publications reported in the Council's last Annual Report has been fully maintained, and some enhancement of staffing has been achieved to enable the sustained workload to be met. The major new undertaking of the year has been the commencement of the major task of re-cataloguing and re-classifying the Council's Library. This has been done using the Bliss system of classification and it is hoped that the work will be substantially complete by the end of 1979. The new catalogues that will be available will permit vastly improved retrieval of the Library's resources and will, it is hoped, lead to more fruitful usage of the Library by current users as well as encouragement to new users to avail themselves of its resources.

The decision in principle to increase the staffing of the Information Services Unit coincided with the resignation of the Council's Librarian/Information Officer. Accordingly a new appointment was made of an Editor/Information Officer and a temporary Librarian was engaged to undertake the re-classification of the Library. It is hoped that it will be possible after the completion of the re-classification of the Library to allocate funds to allow for the appointment of a permanent Librarian who would function also as a second Information Officer.

During the course of the year two books and five booklets have

been published and two further books, to be published in September 1979, are in press. The books already published are *Folio Assessment or External Examination?* and *Standards of Numeracy in Central Region.* (The former of these, a report to the SCEEB, has been published by the SCEEB.) The booklets published are: *Intelligence Testing, 1928-78: What next?* (Professor Vernon's SCRE Fellowship Lecture delivered in September 1978); *Research in the Service of Education* (a set of papers delivered at a Conference in London to mark the Council's 50th Anniversary); *Open Plan Secondary Schools: an annotated bibliography; Curriculum and Assessment: The Response to Munn and Dunning—a pre-publication summary* (which is to be followed by a full report in book form late in 1979); and *Pupils and Staff in Residence.* The last named describes research undertaken outwith the Council. A standard cover of attractive design is now being used for all duplicated booklets produced on the Council's premises.

A six-page pamphlet entitled *Under 5 Provision* that has been recently issued constitutes a new approach to the dissemination of information in that it highlights a small part of the findings of a still current project. It describes a number of experimental methods of publicity (relating to types of pre-school provision available in a particular locality) tried out in the course of the "Demand for, Uptake and Supply of Pre-school Education and Care Facilities" project and indicates the relative successfulness of each method. It is believed that this information will be of value not only to those wishing to publicise pre-school provision in other areas but also to those having a need to publicise other forms of educational provision. A number of agencies have been approached to obtain assistance in distributing the leaflets to appropriate persons.

Reprints of earlier publications made during the year include *Pupils in Profile, SCRE Profile Assessment System Manual,* and the *Burt Word Reading Test (1974 Revision) Manual.* The free pamphlet *Knowing Our Pupils* (which describes publications and materials relating to the *SCRE Profile Assessment System Manual*) has continued to be in demand and has also had to be reprinted.

A conference for teachers on Testing and Teaching was held in May at Moray House College of Education. This constituted one of the normal programme of conferences for teachers held in various parts of Scotland. It was attended by teachers from Lothian, Borders, and Central Regions. The Conference was preceded in April by a Seminar attended by a number of Local Authority Advisers and representatives of Colleges of Education. This

Seminar provided a high level of discussion of papers that had been circulated in advance.

The Conference "Research in the Service of Education" held in London in December 1978 was not only to celebrate the Council's 50th anniversary but to bring to the attention of those south of the Border work undertaken by SCRE that has application not only to Scotland. It provided also an opportunity for many "exiled" Scots to renew contacts with the Council.

General publicity of the Council's activities has been achieved by having the Council's travelling Exhibition on display at a number of locations in various parts of Scotland. Communication with teachers and others has been maintained through the Council's twice-yearly Newsletter, which now has a circulation of 78,000. Sufficient copies are sent to all local authorities to allow each teacher to receive an individual copy. The Council's service to those seeking information in the field of educational research has continued to operate. More than one third of the enquiries dealt with in 1978-79 came from outwith Scotland.

Publications due for issue early in 1979/80 include *Studies in Pre-School Education* (edited by Margaret Clark and William Cheyne) and *Choices and Chances: a study of pupils' subject choices and future career intentions* (by A C Ryrie, A Furst, and M Lauder). Both will be distributed by Hodder and Stoughton.

PROJECT REPORTS

Teaching Strategies in the Primary School

(Researchers: J L Powell (Principal), and E Gordon)

Since completion of the field work of the project in June 1978, the analysis of the data has been progressing, though at a rate a good deal slower than had been hoped. It had originally been planned that the research staff who had carried out the field work would remain employed on the project until December 1978. In the event, the cost of this internally financed project had to be cut on account of a 10% reduction in the Council's basic SED grant that had resulted from a general cut in Government expenditure, and consequently it was possible to retain these staff only until August. The overall loss in staffing provision was therefore in the neighbourhood of one man-year.

Despite these handicaps, all data has now been coded and transferred to computer storage and the initial stages of analysis have been completed.

SUMMARY REPORT OF SCRE PROJECTS

Title of Project	*Principal Research Worker(s)*	*Starting Date*	*Approximate duration*	*Source of Finance*	*Report Page*
Teaching Strategies in the Primary School	J L Powell	1973	6 years	SCRE	18
Trends in Secondary Education	G J Pollock	1974	5 years	SSRC/SCRE	20
Alternative Means of Assessing O-Grade English	E Spencer	1974	3½ years (publication 1979)	SCEEB/SED	21
Awareness of Opportunity	A C Ryrie	1976	6 years 8 months	SED/SCRE	22
Evaluation of the Lothian Region Home Visitor Programme	J Raven and G McCail	1976	2½ years	SED/MSC	23
Demand for, Uptake, and Supply of Pre-school Education and Care Facilities	J Haystead	1976	3 years	DES/SED	24
Employment and Training of School Leavers	G J Pollock and V Nicholson	1976	1 year 8 months	MSC (TSD)	25
The Social Construction of Teachers' Careers	M Corrie	1977	3 years	SSRC/SCRE	26
The Primary School Survey	G J Pollock	1977	2 years	SED	27
An Evaluation of the Reaction to the Munn and Dunning Reports	W B Dockrell and J P Forsyth	1978	1 year	SSRC	28
Standards of Numeracy in Central Region	G J Pollock and W G Thorpe	1978	6 months (publication 1979)	SED	—
Diagnostic Assessment in Secondary Schools Part II	W B Dockrell and H D Black	1978	3 years	SED	29
School-Based Assessment in the Affective Domain	W B Dockrell and H D Black	1978	7 months	SSRC	30
Writing Across The Curriculum	E Spencer	1978	3 years	SED	31
Standardisation of the Standard Progressive Matrices	J Raven	1979	1½ years	SSRC	32

The analysis still to be undertaken will be directed mainly to recording the changes in pupils and pupil performance that were measured over a year in which the pupils were being taught by a teacher whose ways of teaching had been observed and recorded in the course of that year. (The pupil measures included measures of attitude, of application to work, of computational arithmetic, and of grasp of arithmetic concepts.) It is hoped to establish associations between pupil changes and either complete teaching strategies or particular sub-strategies, ie, practices which constitute parts of a number of more general strategies. It is aimed to publish a report in 1980.

Trends in Secondary Education
(Researchers: G J Pollock (Principal), and S Day)

This project has involved a longitudinal study of a random national group of 2000 Scottish pupils who originally participated as 10-year-olds in the 1970 IEA project.

A considerable amount of background data on these pupils was already available from the 1970 testing. It included, for example, details of home background and father's occupation, and measures of interest in science, liking for school and school subjects, and motivation and achievement in reading and science. In September 1974 further achievement and attitudinal measures were collected together with details of educational and job aspirations.

Semi-structured individual interviews were held in the period May-June 1975 and October-December 1975 with some 1600 members of the sample and additional data collected on:

(1) reasons for leaving or not leaving school
(2) actual or expected occupational choice
(3) awareness of possibilities of further study in both the FE and HE sectors
(4) intentions as regards further post-school study.

By June 1978—when all but one member of the group had left school—details of their SCE records and the initial employment or full-time education taken up on leaving school had also been obtained.

Among the topics to be investigated in the project are:

(1) how early leaving relates to earlier measured attitudes and motivation;
(2) the stability of the vocational choices of students as expressed at age 14;

(3) the relationship of attitudes and motivation at secondary level to attitudes and motivation at primary level;
(4) how an increasingly comprehensive system of education affects staying-on rates, and how the gifted and less-able pupils fare in such a system, vis-à-vis the former selective system;
(5) the relationship between specialisation in science and earlier interests and achievement in this field;
(6) the extent to which pupils find themselves constrained by choices made in second year of secondary school and the implications for later educational and job aspirations.

All data have now been coded and transferred to computer tape. The analysis of the final data set is now in process and draft reports on a number of topics should be available by the end of 1979.

The project is supported by a grant from the Social Science Research Council.

Alternative Means of Assessing O-Grade English
(Researchers: E Spencer (Principal), D Stewart (until his death in November 1977), and E Thomas)

The report of this project *Folio Assessment or External Examination?* was published by SCEEB in April, 1979, and is obtainable from SCRE, from Robt. Gibson & Sons Ltd, 17 Fitzroy Place, Glasgow, G3 7SF, or through any bookseller (Price £1.80).

The main conclusions of the research were as follows:

(1) Many schools, with appropriate in-service training, could assess pupils at O-Grade as satisfactorily as the external examination does, but some would not do so.
(2) The external examination itself has the advantages of nationwide currency, well-tried administrative arrangements and an "openness" which allows teachers a freedom of curriculum choice (many teachers do not however take advantage of this freedom). On the debit side, the examination is subject to the problems of marker-unreliability and to problems associated with discrimination among candidates: while the examination seeks to make fine discriminations among pupils, the nature of performance in English makes finer than broad-band grading difficult, if not impossible.
(3) The researchers propose a scheme of combined internal and external assessment of English at O-Grade, with 50% of the marks for each. Such a scheme would slightly improve the

validity and reliability of O-Grade English and would probably have beneficial effects on course-planning and teaching.

Awareness of Opportunity Project
(Researchers: A C Ryrie (Principal), A Furst, S Patterson, J Hunt, C Warren, and E Gordon)

This project is a study of the developing intentions of young people as they move through the later stages of school and beyond it, and of how these intentions are related to influences and guidance received during their schooling, and to the actual opportunities which await them after school. The study is focussed on eight schools, four in the Borders Region and four in Strathclyde Region. In this way members of the research team can be in close contact with the schools to learn about their procedures and practices with regard to curricular and vocational guidance, and can also gather information about the local opportunities for school leavers in employment or further education.

The intention of the project is that it should be an illuminative study. With this in mind, the research team have been conducting interviews with a wide variety of people—teachers, parents and careers officers—in addition to the two successive samples with almost 600 pupils in each. The interview responses are being studied with a view to producing qualitative insights, in addition to being coded for analysis by computer.

By the summer of 1979 all the members of the first sample, with the exception of a few who were doing a sixth year, had left school. The second sample members had either left school or were staying on for a fifth year. All of the young people had by this time been interviewed in their second and fourth years, and some of them in their fifth year also. Details of their progress through school have also been gathered.

During the course of the year two major developments have taken place. One has been the preparation of the project's first report, which deals with the transition from second to third year, the process of subject choice and the intentions of the young people at this stage. This report has been sent to the Scottish Education Department, and is appearing as a publication entitled *Choices and Chances*.

The other major development has been the approval of additional funds by the Scottish Education Department and SCRE to allow the sample members to be followed up a year after they

have left school. This aspect of the project will concentrate on the relationships between the developing intentions of the young people and the actual structure of local opportunities. This further development has involved the appointment of two more research assistants for a period of one year, and the extension of the overall period of the project by one year, so that it is now scheduled to finish in September 1982.

The project is funded jointly by the Scottish Education Department and the SCRE.

Evaluation of the Lothian Region Educational Home Visitor Programme

(Researchers: J Raven and G McCail (Principals), M Nash, and E Ward)

In the Lothian Region Educational Home Visiting Scheme, Educational Home Visitors (EHVs) visit the homes of two to three year old children to "encourage the mothers to play a more active role in promoting the educational development of their children". Visits last for one hour a week and continue for about nine months. In them the EHVs at first work with the child alone but then gradually involve the mother. The mothers are, in addition, encouraged to become more involved in school and community activities.

The scheme was evaluated over a two year period. A draft of the second and third parts of a three-part Report on the evaluation has been completed and a substantial amount of the first part also.

Part I describes the scheme, its origins, development and operation. It incorporates profiles of each of the EHVs at work and a description of the schools and communities in which they work. It explores the effects of the programme in so far as these can be discerned by examining the operation of the programme in the light of the available literature and the data it has been possible to collect by asking the EHVs to tape-record some of their visits and by interviewing some of the parents. The probable effect of the scheme on parents' attitudes and behaviour vis-à-vis their children, the school system, themselves, and the wider society is discussed. It is concluded that the Home-Visitor Programme is likely to have a significant effect on the parents and to stimulate a set of mutually responsible interactions between parent and child. It is suggested that it is almost certain that the programme will achieve its main aim of enabling the children concerned to adjust better to school and to be more successful there.

Part II documents the actual effects of the scheme on parents' attitudes, perceptions, expectations and behaviour in so far as these can be discerned by comparing with two bench-mark samples the results of structured interviews with a sample of forty-one parents who have been visited. One of the bench-mark samples was comprised of mothers of high socio-economic status, and the other of mothers from the communities in which visiting took place.

The effects of the Programme on parents' *attitudes* appear to be dramatic. The parents who have been visited are much more likely to believe that it is possible to influence qualities of their children's intellect and character, and come to think it important to interact with their children in certain specific ways. They also come to feel less fatalistic and better able to be in control of their own lives. Unfortunately, in so far as can be judged from the (less than adequate) data, the scheme appears to have had less effect on parents' actual *behaviour* and, while the parents concerned come to feel that it is important to relate to their children in new ways, there is some evidence that, as a result, they come to feel *less* competent as parents than they did before. It may be suggested that this is because they now think it is important to do things which they do not in fact do.

Part III explores some of the implications of the data collected from the bench-mark samples for education in general and Educational Home Visiting in particular. Among other things, attention is drawn to the tendency of high socio-economic status mothers to facilitate development, through sensitive transactional activity, rather than through teaching their children, and to the fact that many of the qualities which different parents want their children to develop are so incompatible that no system of education which does not provide for a wide variety of educational programmes geared to different goals can expect to be able to facilitate parental involvement in the educational process.

This evaluation project was funded by the SED.

Demand for, Uptake and Supply of Pre-School Education and Care Facilities

(Researchers: J Haystead (Principal), V Howarth, A Strachan, and H Thompson)

An examination of the distribution of pre-school places, throughout Scotland, and throughout Lothian region, shows that it is people living in particularly highly populated urban areas and, at the other extreme, rural areas, who are the least likely to be able to

get a place in any kind of pre-school facility. In the latter case, if there is anything, it is likely to be a playgroup.

Only 4% of our sample were not going to attend any type of pre-school facilities before they went to school. In half these cases, it was because their mothers did not want them to but in the other cases, the reason was either a lack of knowledge about facilities, or practical difficulties involved in taking and collecting the child.

Our attempts to assess the effects of increasing the information level of parents about pre-school facilities showed first that, once parents have a place, they are not very interested in finding out about other possibilities. Secondly, it is very difficult to get mothers to make any positive effort to find out about facilities. The main sources of information are friends, neighbours and relatives.

A study of non-users in a "disadvantaged" area with a shortage of pre-school facilities, seems to suggest that many of these parents are not sufficiently convinced of the value of nursery schools and playgroups to make the effort to take their children. Others are simply waiting for places, particularly for full-day places in day nurseries.

This project is financed by the Scottish Education Department and the Department of Education and Science. The report will be completed by October 1979.

Employment and Training of School Leavers
(Researchers: G J Pollock (Principal), V Nicholson, and E Charleson)

The aims of this project were:

(1) to investigate how pre-employment aspirations and expectations match with real-life experiences in the areas of application for jobs, being accepted for jobs, and training for jobs.

(2) to compare the employment and training opportunities available to young people of both sexes in various areas of Scotland.

Data were collected by means of personal interviews with a representative group of 400 young people approximately 12-15 months after leaving school.

A report on the analysis of the data was presented to Manpower Services Commission (Training Services Division) in August 197, and subsequently forwarded by them to the EEC.

The project was financed partly by the European Social Fund and partly by MSC.

The Social Construction of Teachers' Careers
(Researchers: M Corrie (Principal), S Zaklukiewicz, and M Vallely)

The chief aim of the project is to identify the way secondary school teachers progress through the various work situations which comprise their careers and the way this influences the kind of work they do, the nature of the satisfaction they obtain from such work, and the commitment they develop towards it. A further aim is to describe the implications of such career movement for the educational arrangements of schools, in that these are dependent on the flow of teachers into, within, and from different kinds of work in teaching. The research, which is qualitative in character, is supported by a grant from the Social Science Research Council.

Preliminary work on the project was largely concerned with planning in general and with setting up the initial stages of inquiry, an effort being made to employ "grounded theory" procedures. Exploratory interviews were conducted with the heads of five secondary schools and with teachers occupying a range of posts in the schools. Senior staff in two regional authorities with particular responsibilities for secondary schools and their staffing were also interviewed, as were senior representatives of teachers' professional organisations.

Subsequently the main research effort shifted to the preparation and analysis of data. This chiefly entailed the production of transcripts of each recorded interview. Extensive analyses of data were then made from the final transcripts of interviews with teachers, separate analyses being made of data from the transcripts of interviews with headteachers, education authorities and professional organisations. Statistics supplied by the Department were also subjected to a separate analysis while the literature relating to the concept of career—and, more specifically, of careers in teaching—was examined. As a result of this initial work a number of working papers were produced, the majority of these being based on material from the transcripts of interviews with teachers, with further papers dealing with the other interviews, the official statistics and the research literature. These papers were then reviewed in order to identify topics to be further pursued and to help in planning subsequent work.

The position at present is that a programme of interviews focussed on a number of relevant topics is being carried out with teachers and education authorities in different areas. These will be of considerable value in extending our knowledge in this complex area of investigation. It is expected that later work will make use of

survey procedures in order to produce information on the basis of which more general conclusions can be drawn. The final stages will be largely concerned with the preparation of reports and dissemination since it is expected that research-based information in this area will be of value to a variety of interested audiences, including teachers themselves as well as schools, professional organisations, colleges, education authorities, central government and others. In the context of educational change the nature of the problems facing these groups may be changing. Particular practical problems in this area have centred around the staffing of schools, questions of morale and effectiveness among teachers and similar matters. The present project can be expected to illuminate some of these problems in addition to helping to clarify the nature of any new issues emerging as a result of a changing situation.

The Primary School Survey
(Researchers: G J Pollock and W G Thorpe (Principals); E Charleson, and S Rochow)

The Scottish Education Department is currently involved in an assessment of the quality of education in the primary schools of Scotland. As part of that assessment the Department was anxious to include factual data on current levels of achievement among primary pupils, in the basic skills of Mathematics and Reading Comprehension. The Research Services Unit was asked if it would be prepared to undertake this aspect of the work and, after some clarification of the aspects involved, agreed to do so.

The Edinburgh Reading Tests were available to assess Reading Comprehension, but in Mathematics existing tests were found unsuitable on account of changes in curricula, metrication, and decimalisation. A working party consisting of two members of the Inspectorate and two members of the RSU therefore set to work to construct appropriate test items (though some of the items at the P7 stage were drawn from the SCRE national survey carried out in 1953 and 1963). The range of items included reflected the curricula discussed in Curriculum Paper 13, *Mathematics in the Primary School*. The choice of items was also influenced by the need to have ones of different levels of difficulty, though the initial aim of having the items at three defined levels of difficulty—easy (80% facility), medium (40-60% facility), and difficult (20% facility)—proved hard to achieve in certain areas. After a considerable amount of pre-testing four maths tests were produced

for each stage and each pupil took two of these (approximately 50 items in all).

The fieldwork was carried out in June 1978 in a random sample of 91 primary schools. Testing took place at two stages: P4 (8-year-olds) and P7 (11-year-olds). In each school a maximum of twenty-four pupils from each stage was selected randomly using date of birth, so that approximately 4000 pupils in all were involved (2000 at each stage).

The analysis of the data provides details of performance on individual test items, and in various areas of Reading and Mathematical skills. In addition typical profiles of performance at specified ability levels have been produced.

A draft report of the results will be made available to the SED shortly.

The Evaluation of the Reaction to the Munn and Dunning Reports
(Principal researchers: W B Dockrell and J P Forsyth)

The Munn and Dunning reports gave rise to widespread discussion and debate in Scotland. In September 1977 a one year study was begun to investigate the impact of the reports, to record the reaction to them, and to look at the contribution of national reports to educational policy formation taking the reports of these two committees as examples. This project was funded by a grant from SSRC.

The investigation looked at three groups of reactions, those of the general public, those of interested specialised publics, and those of secondary school teachers. The general reaction was assessed by an analysis of contributions to the press, both professional and lay, and by contributions to other media. The response of specialised publics was assessed by interview of approximately 100 representatives, using a semi-structured schedule. (These "publics" were mainly those with a professional commitment to education but also other lay groups, including parent, church, and political organisations, were included.) In addition, the staff of one third of Scottish secondary schools were invited to respond to a questionnaire. (In the case of the Headteachers, Deputies and Assistant Headteachers the questionnaire covered both the Munn and Dunning reports. In the case of Subject Teachers half were invited to complete a questionnaire on the Munn report and half on the Dunning report.)

The scale of the reaction to the two reports was most striking. Virtually all groups with a professional involvement in secondary

education and many sets of individuals made submissions to the committees or to the Secretary of State. General interest, however, was limited to a small group of organisations with a special commitment to education, and to parents. Most of the correspondence in the lay press was from people professionally involved in education.

There was a very high response to the questionnaire. Virtually all schools invited to participate in the survey did so, and within schools the average response was in excess of 65%. There was a general recognition of the need for change, a broad acceptance of the major outlines of the two reports, but considerable concern over many of the detailed proposals. The interviews permitted an exploration of more general issues, such as factors influencing educational decision-making, expectations of national reports, and the locus of responsibility for different kinds of decisions.

These findings are reported in summary in *Curriculum and Assessment: the response to Munn and Dunning* (SCRE, 1979) and in greater detail in a forthcoming book.

Diagnostic Assessment in Secondary Schools, Part 2
(Researchers: W B Dockrell and H D Black (Principals); G Leckenby)

The traditional view of assessment in education is that it provides a means of selection and comparison of pupils; the Diagnostic Assessment project, part of the School-Based Assessment programme, views assessment primarily as an aid to pupil learning and curriculum evaluation.

The first phase of the project—a feasibility study funded by the SED—was completed in August 1978, its purpose having been to assess the problems associated with introducing Diagnostic Assessment into Secondary Schools. The work was undertaken as a piece of collaborative research, where the researcher acts as an "enabler" helping teachers to find solutions to their own problems.

The second phase, also funded by the SED, which seeks to apply the findings of the feasibility study to larger curriculum segments in a number of subjects, began in September 1978 and will run to August 1981. Work has been, or will be, undertaken with teachers of Home Economics, Technical Education, and Geography, in more than twenty secondary schools. Diagnostic tests and instruments suitable for use in the classroom will be developed as required.

Initially, each school department will be concerned with specific

parts of the curriculum within each subject area. In Technical Education, for example, one unit from a nine-module curriculum package being developed by the SCDS (Dundee Centre) will be studied. The researchers will work with the teachers to create diagnostic instruments which can be used to give teachers feedback on specific learning difficulties of pupils, and also about the appropriateness of their curriculum objectives. Later in the project, participating schools will pool their individual tests and instruments. After a critical evaluation and revision of the products, they will be offered to a number of schools which have not until then participated in the project. The issue at that stage will be the reaction of schools which do not have the support of the research team.

School-Based Assessment in the Affective Domain
(Researchers: W B Dockrell and H D Black (Principals); G Leckenby)

This project is a feasibility study, arising from previous work carried out in the School-Based Assessment programme. Its focus is the assessment by teachers of "affective" pupil characteristics, which are often included in statements of educational aims, but which are rarely assessed systematically.

Working intensively in one large secondary school, the project has tried to answer two questions:

(1) Which affective characteristics do teachers consider it important to assess?

(2) How can assessments of these characteristics be made?

In the first part of the project, 80 teachers assessed a class of pupils each, on some twenty-five affective characteristics. Analysis of this data suggested that it was possible to define two traits ("conscientiousness/perseverance" and "confidence") which were considered important by all departments, and a number of other traits which were unique to particular departments. The second part of the project attempted to create, with teachers, a reliable means of assessing these characteristics, using a consensus technique which reduces inconsistencies among teachers within each department. This should result in a more reliable assessment system for affective objectives than the purely subjective approach used at present.

The project is working within an area which practising teachers consider to be problematic: the Collaborative Research approach employed reflects the view that teachers and researchers have

equally important contributions to make to the research and can work together profitably in tackling the problem.

The research is supported by the Social Science Research Council through the award of a research grant.

Writing Across the Curriculum
(Researchers: E Spencer (Principal), and J Lancaster)

This project, commissioned by the Scottish Education Department, draws financial support not only from the SED but from two Regional Authorities—Lothian and Strathclyde—that have each given paid secondment to a teacher to work on the project. This giving of financial support by the Regions is much appreciated, but its value is not solely financial: much of its importance in fact lies in the feed-back these teachers will carry to the schools when they return to their teaching duties.

The project is in two main parts: (1) During 1978-79, feasibility work for "in-depth studies" and a National Survey, (2) During 1979-81, "in-depth studies" of twelve secondary schools.

(1) The "National Survey" took place during the first week of November, 1978, and involved the collection of all the written work done in and for school during that week, in all subjects, by a randomly chosen group of pupils in 100 Scottish local authority secondary schools, the method of selection of schools ensuring representation of all types of school and geographical area. The researchers have categorised the pupils' work as "Question answering", "Copied", "Dictated", "Self-generated", etc., and will be able to measure the amount of writing done in each category. A report on this survey should be available by early autumn, 1979. It is intended only to provide an overview of the writing tasks set in the week of the survey and a general impression of the amount of writing of various types which the pupils did. The researchers recognise that such an investigation misses much of importance about the context in which the work was done. Accordingly, during the period of the survey work, the researchers, in preparation for the second stage of the project, have been piloting interview schedules for pupils and teachers and have been trying to develop a more detailed scheme for describing and categorising pupils' written work and the qualities to be found in it.

(2) "In-depth" studies are planned in 12 schools during school years 1979-80 and 1980-81, two schools per term. The intention is to collect and analyse the written work in all subjects of 30 pupils per school, 10 in each of Second, Third and Fourth Years, and to find out by classroom observation and interviews as much as

possible about the context of the work: descriptions will therefore be written of the purposes for which it was set, the pupils' perceptions of it, the teachers' expectations of the skills and qualities the pupils should exhibit in it . . . and so on. Attention will also be paid to the writing tasks set in the SCE O-Grade examinations in each subject. The researchers' categorisation and analysis of the work will then be matched against the teachers' and pupils' expectations and perceptions, so that the teachers and the researchers may jointly form a judgment as to the appropriateness of the tasks set and the demands made on the pupils for helping them to learn. There should also emerge information about pupils' total writing experience in school, and about the methods (if any) used by various departments to *teach* them to write. Such information might be valuable in determining a school's language teaching policy.

A swift feedback to the teachers involved has a high priority in the project plans: it is hoped to provide the schools with some case-studies within one term, and also to circulate selected case-studies (of subjects or of schools) to the many schools which have expressed a wish to be kept informed of the progress of the project.

It is hoped to make the work of the project of direct use to classroom teachers. In particular, collaboration in the project may allow them to become more aware of the role of writing in learning, to see more clearly what sort of writing task is effective as a means of helping pupils to learn, and to recognise needs their pupils may have to be *taught* how to meet the demands of written work.

Standardisation of the Standard Progressive Matrices
(Researchers: J Raven (Principal), and S Rochow)

In this new study, up-to-date normative data for this widely-used test will be collected on a representative United Kingdom sample of approximately 4,500 children aged six to fifteen inclusive. The sample is being clustered in seven areas of the country so that personal contact can be made with the staffs concerned in the hope of achieving high response rates. It is anticipated that testing will take place in October and November of 1979. This project has been funded by the SSRC and administered by the Council.

The Research Services Unit
(Researchers: G J Pollock (Head of Unit), W G Thorpe, S Freshwater, E Charleson, and S Rochow)

The Research Services Unit provides a service for bodies working

in the educational field. The work which the Unit undertakes can be classified under three main headings:

(1) Professional advice and consultancy
  (a) on the design and planning of research projects
  (b) on the evaluation of external research projects
  (c) on the selection and use of test materials
  (d) on the selection procedures for training programmes
(2) Statistical services and data processing
  (a) consultation and general advice on statistical matters
  (b) assistance in the analysis of data
  (c) validation of selection procedures
(3) Collaboration with other bodies in research projects
  (a) service on research committees and steering committees
  (b) collaboration in joint projects with external bodies
  (c) the carrying out of surveys and other contract work for external bodies

Work completed by the Unit in the past year includes:

(1) A follow-up of the 1974 survey of achievement levels in Central Region primary schools. A report of the findings entitled *Standards of Numeracy in Central Region* was published in June 1979.
(2) The Primary School Survey (see report on page 27).
(3) Two minor studies:
  (a) The arithmetic test data gathered from the two surveys conducted in Central Region (1974 and 1978) were analysed using Rasch techniques to gain familiarity with this approach. The results were sufficiently encouraging to justify further study. A draft report has been submitted to the SED.
  (b) The Royal Hospital for Sick Children again called for help in analysing admission and treatment data from their psychological unit.

Currently the Unit is collaborating in a study of mathematics achievement at secondary school level being organised by the International Association for the Evaluation of Educational Achievement. The Council represents Scotland in the Association and a Scottish National Committee has been set up, for which the Unit provides the required technical facilities. Two staff members (Mr Pollock and Mr Thorpe) serve on the National Committee while Mr Pollock is also a member of the International Committee. It is planned to carry out a cross-sectional study of pupil attitudes

and achievements in mathematics at two population levels—S2 and S5-6. The testing at S2 will take place in June 1980 and for S5-6 in December 1980.

RESEARCH GRANT AIDED BY THE COUNCIL

Investigating a Teaching Technique for Developing Written Language

(C M Hunter)

This collaborative research project, which began in 1978, set out to investigate the advantages and disadvantages of a teaching technique developed by an individual teacher. The aim was to determine whether the success of this method of using a drafting and redrafting procedure (D/R) was derived from the skill of the particular teacher or whether the method had merits in itself. Both teachers' and some pupils' perspectives were taken into account.

All the work for the project was voluntary. It was carried out by full-time employed teachers as a part of their normal classwork.

The self selected group of 6-9 interested teachers had become involved in using some form of D/R prior to the project. They had varying lengths and ranges of teaching experience, were from seven different schools, and taught at different stages of Secondary and Primary school and different subject areas (Primary and English, Science, Remedial).

At Research meetings, in which the researcher and originator of the technique also participated, each teacher's approach to using D/R was described and discussed. Illustrations from pupils' jotter work were analysed with a view to describing the nature of progress in developing written language. A small grant of £900 was provided by SCRE to help with costs of duplicating copies of pupils' work and notes from meetings, tape recording classwork and research meetings, and secretarial expenses.

The final report, to be submitted in September 1979, will critically review the collaborative research method, and provide description to date of D/R as used by the originator and the teachers in the project.

In addition to the main report there will be some "technical supplements". These are written by the individual teachers to illustrate and discuss in depth some aspects of their own experiences of D/R. There will also be a videotape.

SCRE SILVER MEDAL

The Council's Silver Medal for 1979 has been awarded to Dr Steuart H Kellington. This award, the fourth of its kind, is made in respect of publications relating to educational research in the calendar year preceding the award. The researcher, who must be under 40 years of age, must either be working in Scotland or be Scottish by birth.

Dr Kellington, who is in the Department of Physical Science at Notre Dame College of Education, has produced a number of reports on the evaluation of the Scottish integrated science materials. Since 1976 he has been publishing material on educational research in science and has done much for the development of this subject in the Scottish curriculum. His most recent publications are *"The achievement of course objectives by pupils following the new materials for Scottish Integrated Science" (Studies in Educational Evaluation,* Summer 1978), and *"Assessment in Scottish Integrated Science" (Research Bulletin,* Scottish Curriculum Development Services, Dundee Centre, February 1979).

The medal will be presented at the Council's Annual General Meeting on 12th September 1979.

SCRE RESEARCH FELLOWSHIP

The Council's Research Fellowship for 1979 has been awarded to Cyril Hellier in respect of his MEd thesis entitled *"The Profoundly Handicapped Child in the Special School"* which was judged by an Adjudicating Committee to be the best non-doctoral thesis in the field of education presented to a Scottish university in 1978.

In the thesis, both assessment of profoundly retarded children, and the organising of educational programmes for such children, are dealt with.

Mr Hellier has been studying in the Department of Education at the University of Dundee; 1979 is the third successive year that a Dundee student has been successful.

LIAISON WITH OTHER ORGANISATIONS, PAPERS DELIVERED, AND CONSULTATIVE SERVICES UNDERTAKEN BY THE COUNCIL'S STAFF 1978-79

Council Representation on Committees

International Association for the Evaluation of Educational Achievement (IEA)— Executive Committee (D)*
International Association for Educational Assessment (IAEA) (D)
Consultative Committee on the Curriculum, Scottish Education Department (and Chairman of Editorial Committee for "CCC News") (D)
IEA Mathematics International Committee (DD)*
Schools Council, Consultative Committee on the Impact and Take-Up of Schools Council Projects—Chairman (D)
Inter College of Education Research Committee (DD)
SERA Executive Committee—Chairman (DD)
BERA Executive Committee (DD)
Scotbec Policy Review Committee (DD)
Convention of Scottish Local Authorities, Working Group on Corporal Punishment in Schools (D)
Lothian Region Education Department, Working Party on Corporal Punishment in Schools (D)
CCC—Education for the Industrial Society—Language Working Group (AD)*
Scottish Central Committee on English, Sub-Committee on Curriculum and Assessment (Mr E Spencer)
Scottish Central Committee on English, Sub-Committee on Assessment in S1 and S2 (Mr E Spencer)
Jordanhill Unified Vocational Preparation Group (DD)
SSRC/NFER Register of Research—Consultative Committee (AD)
Adult Literacy Project—Steering Committee (AD)
University of Glasgow, Department of Education, Scottish School Council Project, Advisory Committee (D)
SED—Item Banking in Mathematics Committee (DD)
Dundee College of Education Writing Across The Curriculum Project (Upper and Early Secondary), Advisory Committee (Mr E Spencer)
Jordanhill Classroom Interaction Project—Advisory Committee (Mr W G Thorpe)

*D —Director
DD —Depute Director
AD —Assistant Director

Papers Delivered at External Conferences*

Director	"Assessment in the Affective Domain", International Congress on Applied Psychology (Munich, July 30, 1978)
	"Testing and Teaching", Fundacao Carlos Chagas (Sao Paulo, Brazil, November 20, 1978)
Depute Director	"The Transition from School to Work", BERA Conference (Leeds, September 6, 1978)
	"The Employment and Training of Young School Leavers in Scotland", SERA Conference (St Andrews, September 29, 1978)
	"A Possible Minimal Competence Component of the Second IEA Mathematics Study", Symposium on International Assessment and the Controversies of Mathematics Education, AERA Conference (San Francisco, April 11, 1979)
H D Black	"Collaborative Research from Both Sides of the Same Fence", SERA Conference (St Andrews, September 1978)
	"Content and Process in the Assessment of Intended Learning Outcomes", Association for Studies in the Curriculum Annual Conference (Edinburgh, April 1979)
	Lectures and/or Workshops on Diagnostic Assessment (Broxburn, Cumbernauld, Edinburgh, Hamilton, Glasgow, Pirniehall, Seamill)
E Spencer	"The Assessment of English: What is Needed?", SCCE Consultative Conference on English (Falkirk, November 1978)
	"Learning to Write and Writing to Learn", SERA Conference on Curriculum Research (Stirling, June 15, 1979)
	"Assessing English"—two lectures, SCCE Summer Institute for English (Edinburgh, June-July 1979)
	Lectures and/or Workshops on Assessment Planning, on Writing Valid Questions, on improving reliability, and on correcting writing (Seamill, Hamilton, and Dundee)

* Papers relating to, or arising from, SCRE projects were given at Conferences run by the Council by the following: the Director, the Depute Director, H Black, M Corrie, J Haystead, E Spencer, A C Ryrie, W G Thorpe, and S Zaklukiewicz.

J Raven	"An Evaluation of an Educational System", International Congress on Applied Psychology (Munich, July 30, 1978)
	"Accountability in Education", BERA Conference (Leeds, September 1978)
	"The most important problem in Education is to come to terms with values", British Psychological Society: Education Section (Durham, September 1978)
	"Intervention as Interference", British Psychological Society: Developmental Section (Nottingham, September 1978)
	"The Organization of Social Research in Modern Society", British Psychological Society: Occupational Psychology Section (Sheffield, January 1979)
	"The Role of Educational Home Visiting in Promoting the Educational Development of Young Children", SSRC Conference on Language in the Home (Cardiff, January 1979)
Dr J Haystead	"Pre-School Education and Care", British Association for Early Childhood Education Annual General Meeting (Craiglockhart College, March 1979)

Participation at other Conferences

The Director represented the Council at three major conferences:

(1) UNESCO, "Regional Meeting of Experts on Examinations and Other Procedures for the Evaluation of Educational Achievements and Experiments in the Context of Lifelong Education in Europe", Paris, December 11-16, 1978.

(2) SSRC/SCRE, "Sixth Language and Learning Seminar", Cardiff, January 4-6, 1979.

(3) International Association for Educational Assessment, "Evaluation of Educational Programs and Systems", Princeton, New Jersey, May 28-31, 1979

Meetings of the Scottish Educational Research Association and the British Educational Research Association and a joint seminar with the National Foundation for Educational Research in England and Wales enabled SCRE to consult widely with other researchers, teachers, etc. In addition attendance by staff at specialist conferences made a valuable contribution to staff training and to the dissemination of ideas.

Journal Articles and Other External Publications

Director	(Editor) "School and After. A European Symposium", Council of Europe (NFER, 1978).
	"Fifteen Thousand Hours", a Review, in *Community Education*, Spring 1979.
	"National Surveys of Achievement" in *Issues in Educational Assessment* (SED Occasional Papers, HMSO, 1979).
Depute Director	"Rapporteur's Summary of Proceedings" in *Research Perspectives in the Transition From School to Work*, edited by Guy Neave (Swets and Zeitlinger, 1978) pp. 90-96.
E Spencer	"Counter-thrust (a contribution to a debate on multiple-choice testing in 'O' Grade English)", in *Teaching English*, May 1979, Vol. 12, No. 3.
	"The Assessment of English: What is Needed?" in *Issues in Educational Assessment* (SED Occasional Papers, HMSO, 1979).
	Folio Assessment or External Examination? The report on the SCEEB/SCRE project on Alternative Means of Assessing O-grade English (The Scottish Certificate of Education Examination Board, 1979).
J Raven	"Perceptions of, and Reactions to, the Educational System and their Implications for Policy", in *Studies in Educational Evaluation*, 1978, 4, pp. 31-45.
	"An Abuse of Psychology for Political Purposes?" in *Bulletin of the British Psychological Society*, 1979, 32, pp. 173-177.
	"Government Policy and Social Psychologists" in *Policy Studies Review Annual*, Vol. 2, 1978 (ed. H E Freeman), pp. 160-166.
M Vallely (with R J Buswell)	"A survey of industrial research and development in the Northern Region" in Newcastle Upon Tyne Polytechnic's *Occasional Series in Geography No 1*, September 1978.

ACCOUNTS FOR THE YEAR ENDED 31 MARCH 1979

BALANCE SHEET AS AT 31 MARCH 1979

Employment of Funds			*1979*	*1978*
Fixed Assets				
Office Furniture, Furnishings and Equipment at Cost, less Aggregate Depreciation (Note 5)			£7,500	£8,000
Pension Fund—Investment & Cash on Deposit (Note 6)			—	907
Current Assets, less Current Liabilities				
Sundry Debtors and Prepaid Charges		£60,013		£49,669
Cash on Deposit		6,681		921
Cash in Bank Current Account		624		—
Cash in Hand		76		1,862
		£67,394		£52,452
Less Sundry Creditors and Accrued Charges	£15,593			11,630
Bank Overdraft	10,709	26,302		346
Net Current Assets			41,092	£40,476
			£48,592	£49,383
Funds Employed (Note 7)				
Publications Fund			£15,307	£10,243
Maintenance Fund			6,500	6,500
Pension Reserve Fund			—	1,267
50th Anniversary Fund			—	1,000
General Fund			26,785	30,373
			£48,592	£49,383

HUGH FAIRLIE, *Member of Council*
JOHN C SHAW, *Member of Council*

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 1979

Income	*Note*	*1978-79*	*1977-78*
Support Grants and Donations	1	£155,857	£156,951
Contributions towards Cost of Projects	2	134,202	153,737
Other Income	3	1,133	4,015
Interest on Deposits		194	1,264
		£291,386	£315,967
Expenditure			
Projects	2	158,348	172,826
Other Projects, Services & Grants	3	49,112	57,410
		£207,460	£230,236
General Expenditure	4	87,514	81,776
		£294,974	£312,012
DEFICIT (SURPLUS) for Year	7	£3,588	£(3,955)

REPORT OF THE AUDITORS TO THE MEMBERS OF THE SCOTTISH COUNCIL FOR RESEARCH IN EDUCATION

We have examined the foregoing Balance Sheet, Income and Expenditure Account and the attached Notes on Accounts which have been prepared under the historical cost convention. In our opinion the Accounts comply with the Companies Acts 1948 and 1967 and together with the Source and Application of Funds Statement give a true and fair view of the state of the affairs of the Company as at 31st March 1979 and of the deficit and of the source and application of funds for the year ended that date.

ROBERTSON, CARPHIN & CO, CA.

Edinburgh, 29th June 1979

STATEMENT OF SOURCE AND APPLICATION OF FUNDS FOR THE YEAR ENDED 31st MARCH 1979

Funds Generated		*1978-79*	*1977-78*
Grants and other income		£291,386	£315,967
Sales of Publications		10,152	7,445
Grants from Scottish Education Department—			
Publications Fund		—	2,500
Pension Fund		5,000	—
Capital Expenditure		17,250	—
Pension Reserve Fund			
Interest Received		294	—
Gain on Sale of Investment		64	92
Capital Sum receivable		7,700	—
Items charged against revenue not involving movement of funds:			
Depreciation	£1,835		2,010
Transfer to Publications Fund	—		2,000
Transfer to Maintenance Fund	—		3,000
Transfer to Pension Reserve Fund	—		279
Transfer to 50th Anniversary Fund	675		1,000
		2,510	
		£334,356	£334,293

Application of Funds			
General Expenditure		£294,974	£312,012
Expenditure on publications		5,088	9,979
Expenditure on office furniture, furnishings and equipment		18,585	1,609
Expenditure on 50th Anniversary		1,675	—
Pension Fund—Sums applied on Pension Rights		11,706	—
Grant repayable to SED		2,619	—
Investment on Pension Reserve Fund (including bank deposit)		—	294
		£334,647	£323,894

Total Increase (Decrease) in Working Capital		(£291)	£10,399
Represented by:			
Increase in Debtors	£10,344		£23,230
Increase (Decrease) in Cash and Bank Balances	(£6,673)		(15,379)
Decrease (Increase) in Creditors	(3,962)		2,548
		(£291)	£10,399

ACCOUNTING POLICIES

A. *Depreciation*
Office furniture, furnishings and equipment are depreciated by an overall annual charge, with a view to writing down the assets to approximate scrap value at the end of their estimated useful lives.

B. *Taxation*
The Council has charitable status as an educational body and accordingly has no Corporation Tax liabilities on revenue surpluses or untaxed interest.

C. *Publications Fund*
In order to avoid depletion or distortion of the Council's income and expenditure in any one year, the costs of publishing research findings are normally charged to the Publications Fund. The Fund is maintained from sales of these publications as and when they take place, from grants, and from periodical transfers from the Income & Expenditure Account. No value is placed on stocks of unsold publications.

D. *Maintenance Fund*
The Maintenance Fund has been set up to meet extraordinary expenditure on the Council's leased premises.

E. *Pension Reserve Fund*
The Pension Reserve Fund was established to provide in future years all or part of the Council's additional costs arising from inflation of providing pensions for members of the staff and has now been fully applied.

NOTES ON ACCOUNTS

1. Support Grants and Donations		*1978-79*	*1977-78*
Scottish Regional Education Authorities:			
Borders		£420	
Central		1,134	
Dumfries and Galloway		—	
Fife		—	
Grampian		1,929	
Highland		798	
Lothian		3,179	
Shetland (2 years)		162	
Strathclyde		10,360	
Tayside		1,688	
		126	
		£19,796	£19,867
Scottish Education Department	£156,250		
Less: Specific Grant for Capital Expenditure	17,250		
Special Grant for Pension Fund	5,000	134,000	135,000
Educational Institute of Scotland		1,500	1,500
Local and District Associations of Educational Institute of Scotland:			
Aberdeen	£10		
Borders	18		
Dundee	5		
Edinburgh	25		
Ettrick	10		
Fife	30		
Gordon	10		
Kincardine and Deeside	5		
Moray and Nairn	10		
Orkney	10		
Roxburgh	25		
Stewartry of Kirkcudbright	10		
West Lothian	30		
Wigtown	3	201	226
Grant Aided and Independent Schools:			
Edinburgh Merchant Company	£165		
Robert Gordon's College, Aberdeen	40		
St Brides School	5	210	188
Other Grants:			170
Scottish Educational Research Association		150	
		£155,857	£156,951

2. Specially Funded Projects	*Income*	*Expenditure*
Trends in Secondary Education	£10,729	£12,827
Alternative Means of Assessing 'O' Grade English	22	360
Awareness of Opportunity	15,234	20,879
Evaluation of Lothian Home Visitor Programme	6,217	6,968
Priorities in Adult Education	6,699	6,699
Demand for Pre-School Education and Care	30,976	30,976
Employment and Training of School Leavers	4,216	5,820
The Social Construction of Teachers' Careers	14,043	18,210
*The Primary School Survey	7,016	11,214
Evaluation of Reactions to the Munn and Dunning Reports	10,520	12,708
Diagnostic Assessment in Secondary Schools	11,039	13,571
School-Based Assessment in the Affective Domain	2,289	2,289
Writing Across the Curriculum	10,514	10,786
*Rasch Analysis of Arithmetical Data	475	828
Reclassification of SCRE Library	2,398	2,398
Language and Learning Seminar	836	836
Pakistan Primary Education	476	476
Feasibility Study conducted for SCEEB	251	251
Council of Europe Symposium	252	252
	£134,202	£158,348

3. Other Projects, Services, and Grants		
*Research Services Unit—		
General Service	—	6,397
IEA Mathematics Survey	—	2,574
Standards of Numeracy in Central Region	—	1,919
Student Choice in Higher National Diploma Courses	—	635
Teaching Strategies in the Primary School	—	14,652
Project Development	—	6,504
Information Services—Conferences	705	1,052
Other	428	14,809
Grants	—	570
	£1,133	£49,112

Explanatory note on Expenditure

(a) Expenditure includes, in addition to the direct costs and recoverable overheads, a proportion of senior staff costs not normally charged to the sponsoring body.

(b) Items marked * are projects undertaken by the Research Services Unit. Total income for the year amounted to £7,491 and total expenditure to £22,932.

4. General Expenditure		*1978-79*	*1977-78*
Salaries and Other Employment Costs			
Administrative Salaries, Pensions, National Insurance and Pension Contributions		£68,380	£62,714
Less: Officials' costs charged to Project & Services		15,246	13,891
		£53,134	£48,823
Staff Travelling Expenses		1,475	1,064
Staff Training		2,387	1,375
Staff Advertising		2,410	1,844
Consultancy Fees		105	500
		£59,511	£53,606
Office Accommodation			
Rent, Rates and Feu Duty	£8,648		£6,041
Insurance	1,876		1,376
Heating and Lighting	3,082		2,851
Repairs and Renewals including £Nil Maintenance Fund Transfer (1977/78, £3000)	1,974		4,904
Cleaning	2,069		1,732
		£17,649	£16,904
Other Expenditure			
Telephones and Postages	6,255		6,862
Printing and Stationery	3,304		4,046
Expenses of Council and Committee Meetings	1,168		1,046
Audit and Accounting Fees	1,498		1,007
Hire of Equipment	1,728		476
Depreciation	1,835		2,010
Transfer to 50th Anniversary	675		1,000
Professional Charges	1,461		—
Bank Interest	231		—
Miscellaneous	1,024		979
		19,179	£17,426
		£96,339	£87,936
Less: Overheads charged to specially funded projects	£8,693		6,071
VAT Recovered	132		89
		8,825	£6,160
		£87,514	£81,776

5. Office Furniture, Furnishings and Equipment	*1978-79*	*1977-78*
Cost at beginning of year	£24,544	£22,935
Expenditure during year	18,585	1,609
	£43,129	£24,544
Less: SED Grant received	17,250	—
Cost at end of year	£25,879	£24,544
Aggregate Depreciation at beginning of year	£16,544	£14,534
Depreciating Charge for year	1,835	2,010
Aggregate Depreciation at end of year	£18,379	£16,544
Cost less Aggregate Depreciation at end of year	£7,500	£8,000

6. Pension Fund Investment and Cash on Deposit		
£593.96 13% Treasury Stock 1990 (Market Value at 31.3.78 £628)	—	570
Cash on Deposit	—	337
		£907

7. Movement of Funds	*1978-79*	*1977-78*
Publications Fund		
Grant from SED	—	£2,500
Transfer from Income and Expenditure Account	—	2,000
Income during year	£10,152	7,445
	£10,152	£11,945
Less Expenditure	5,088	9,978
	5,064	£1,967
Fund at beginning of year	10,243	8,276
Fund at end of year	£15,307	£10,243
Maintenance Fund		
Transfer from Income & Expenditure Account	—	3,000
Fund at beginning of year	6,500	3,500
	£6,500	£6,500

Pension Reserve Fund			
Fund at beginning of year		£1,267	£895
Interest received		294	93
Gain on sale of investment		64	—
Grant received from SED		5,000	—
Capital sum received from Insurance Company		7,700	—
Transfer from Income & Expenditure Account		—	279
Fund at end of year		£14,325	£1,267
Capital Sum applied to Lothian Regional Council Pension Fund	£10,316		
Premium paid to Insurance Company	1,390		
Grant repayable to SED	2,619		
		£14,325	£—
		£—	£1,267
50th Anniversary Fund			
Fund at beginning of year		£1,000	£—
Transfer from Income & Expenditure Account		675	1,000
		1,675	1,000
Expenditure		1,675	—
Fund at end of year		—	£1,000
General Fund			
Fund at beginning of year		£30,373	£26,418
Deficit (Surplus) for year		3,588	(3,955)
Fund at end of year		£26,785	£30,373

AN OCCASIONAL PAPER PRESENTED BY A MEMBER OF THE COUNCIL'S STAFF

Teachers as Researchers—In Search of a New Pragmatism for Educational Enquiry

H D Black, Research Officer, SCRE

(A slightly shortened version of a paper presented to a joint meeting between researchers from the National Foundation for Educational Research in England and Wales and from the SCRE, June 1979.)

Open any research report of the Scottish Council for Research in Education written up to the 1950's, and with few exceptions you will find that the work was directed by a substantial research committee. Scan the names and places of work and you will be surprised by the number of classroom teachers and rectors who were involved. Search through the rest of the volumes and you will find that celebrated authors from the Scottish academic past, such as Godfrey Thomson and Philip Vernon share the shelves with books by eminent headies such as Hunter and Earle. Look at any other publisher's education list today and you will have great difficulty in finding the name of anyone who frequently crosses the threshold of chalk face reality at 9 o'clock in the morning.

So where have all the teachers gone? Are we to assume that our present generation has bred a profession of uninspired educational operatives who are unwilling or unable to contribute to the theory and development of teaching and learning? Or could it be that a new breed, the professional educational researcher has so monopolised the resources that it is very difficult for the teacher to gain a toehold in the world of systematic enquiry.

Why the Change?

Why is it then that teachers have come to play little more than a passive role in educational research? The hypotheses offered here are no more than an essay in illuminative introspection. However an element of verification can be offered from the work carried out by both teachers and researchers in Phase I of the Council's Diagnostic Assessment Project.[1]

Perhaps the most potent force militating against teachers being involved in research is the way in which the educational system encourages the development of *subject* expertise at the expense of *pedagogic* expertise. The Colleges' post-graduate training entry

procedures discriminate strongly in favour of first degree results rather than developing alternative predictors for teaching success. The criteria for teaching any subject at any level in Scotland are strictly laid down by the GTC in terms of undergraduate courses.

Perhaps even more important, with the exception of "guidance" post, the promotion system in Scottish secondary schools below the assistant Head Teacher grade, and including the regional advisorate is strictly on a subject basis. In short, the system encourages the development of good Physicists, Historians and Mathematicians at the expense of good teachers who accept that beyond a certain minimal (but high) level of competence in their subjects, their real need is to develop divergent thinking in pedagogy.

An associated distractor from potential involvement in educational research is that the teacher often obtains considerable satisfaction from designing idiosyncratic approaches to his subject. The point about this is that it is enormously consumptive of time but is construed as a legitimate if not admirable feature of good teaching practice. And so we find the "good" department which is snowed under with its own fantastic worksheet production factory, churning out often illegible, marginally idiosyncratic versions of the same Biology as is being taught by every other teacher in the country. And of course, those teachers who display above average competence at this enterprise find their way onto the working parties of the Schools' Council, Scottish Curriculum Development Service or whatever and thence out of the classroom and into the administrator's chair.

And in the fact of such a fine indulgence, what chance has the teacher who says "why bother". It is far from trendy in the massive curriculum development machine to use text books and other people's curriculum materials to give yourself time to do research into how children learn, what children learn and how best to teach them.

The school itself seldom contributes to legitimising research. Teachers often have latent ideas, but lack the confidence to develop them. But time, money, secretarial and administrative services, expert consultation with the school and support from outside agencies are seldom forthcoming. The problems associated with this lack of an infrastructure to support research activities is further accentuated by the difficulty of persuading colleagues from other subject departments that inter-departmental enquiry is a legitimate research activity and not an attempt to invade heavily guarded private empires.

It is perhaps not surprising therefore that many teachers view researchers and research as being only remotely connected with the practicalities of the real teaching situation. The teacher wants immediate practical solutions to his problems as he sees them and this "hard results" demand is often incompatible with the researchers meticulous approach to verifiable theory. Through a wide variety of tensions and constraints then, the teacher has come to find it increasingly difficult to develop a research perspective for his activities. This is in stark contrast to Stenhouse's[2] view that where the teacher takes on the role of researcher he must develop the capacity to see educational action as hypothetical and experimental and must in part account for the small involvement that teachers typically have in present day research.

But of course, the teachers' perspectives provide us with only one side of the coin. What of the perspectives and dispositions of the researcher?

For a start, many professional educational researchers come from backgrounds in Psychology, Sociology and Statistics and are using education as a medium in which they can apply and test their own theories rather than develop theories and modes of practice which are of immediate relevance to the teacher and the classroom. The effect of this has been to develop terms of reference and tests for truth in educational research, which come not from the field of knowledge which we call education, but from other disciplines or forms of knowledge in which most practising teachers have little expertise. The result is more than a jargon barrier. It is akin to telling golfers to stop reading books where the terms of reference are those of the experienced player, and learn the appropriate theories from metallurgy, aero-dynamics and brewing.

Notwithstanding the likelihood of my slipping into the same trap at several points in my paper, there can be little doubt that this generally accepted mode of approach to educational research has a strong alienating effect on the teacher.

Irrespective of their background however, there is a tendency amongst researchers to assume that they are better than teachers at carrying out educational research. This stems partly from the fringe disciplines strategy and also from the relatively unprofessional attempts at research coming from most teachers who try it on their own. However, given the constraints on teachers acting as researchers outlined above, this is hardly surprising. Much more important to grasp is that in any group of teachers, some will be less effective, some as good and some better than the researcher in developing the study. And furthermore, the teacher has potentially

a rich wealth of educational expertise at a pragmatic level which he should be given the confidence to exploit.

Which leads to another difficulty. If the researcher plans and develops his study on the assumption that he has all the necessary knowledge and skills and that the teacher cannot add anything, so by definition he will exclude the teacher from active participation in his research design. And this in turn becomes a self-fulfilling prophecy. For by not being involved from the start, the teacher will lag behind the research in developing the knowledge, skills and predispositions of the latter, or indeed by holding views which are tangential to those of the researcher, may develop different terms of reference to the particular problem.

Finally, at a pragmatic level the researcher may see the teacher's participation as problematic in that the latter's research laboratory is the classroom which is a great source of "noise" and contaminated data. Eisner[3] portrayed this attitude succinctly when he suggested that "educational research is typically a commando raid—it keeps the data clean". Yet if as Stenhouse[4] suggests, the classroom is to be the testing place for educational theory rather than the recipient of educational theory "tested" elsewhere, we must develop means of working in classrooms, and the potential researchers who are already there are known as teachers.

Should teachers be involved in research?

Of course, in all of the foregoing I have argued with an implicit assumption that it would be a "good" thing if teachers became more involved in research. But why should they? What are the potential benefits for the interested parties?

To begin with, despite the current Government cutback in expenditure, research is generally recognised to be an essential element in the educational system. Hoyle[5], for example, commenting on change in education states that,

> "It is now becoming widely accepted that educational innovation is not a temporary process, a rather tiresome interlude between long periods of peace and stability. The rate of social, economic and technological change outside the educational system is too persistent for that, and the educationist, whilst continuing to perform *some* relatively unchanging tasks, will need to readjust many of his functions in response to their broader changes."

To interject a value judgment, I would suggest that the teaching profession should be taking a much more active part in objectively investigating the many problems and issues arising from the

dynamic system in which they work. If for this reason only there can be no doubt that teachers have an important role to play in research.

However, it would be patronising to suggest that teachers should take part in research because it would be good for them. A much stronger argument is that their involvement would produce better research. Stenhouse's[6] paper, quoted above, argues that research should produce theory that will enrich action and that schools should be seen as a testing ground for theories arising from psychological and sociological enquiries, rather than the point of application for theories "verified" elsewhere. I would go further than this and suggest that the best grounded theories[7] will arise from the systematic investigation of educational practice, and to use Glaser & Strauss'[8] terminology, the teacher should become a theory generator and not a theory user. Such is unlikely to come to pass in the present situation.

But there is a pragmatic side to this argument as well. As stated above, for apparently good reasons, the "pure" researcher rejects the classroom as his laboratory. But if the teacher is part of the research team and not part of the "researched", he is in the best position to control the noise variables. And who is to suggest that the psychology laboratory, the questionnaire or the interview provide uncontaminated data when they are by definition artificially contrived situations.

The potential advantages of teacher participation in research might in the long term however, provide its greatest benefit to the institutional health of schools themselves.

Chin[9] amongst others distinguishes three levels of change strategy ranging from the "power-coercive" which means basically telling teachers to accept an innovation, through the "normative-re-educative" which might, for example, include in-service training, to the "rational-empirical" involving applied research, action research etc. But it is a well known fact that while at the macro-level, "power-coercive" strategies such as changing the school leaving age will work, at the level of the individual teacher, an instruction to change one's teaching style from the didactic to the heuristic is not a sensible means of proceeding. The rational-empirical approach to change however is more likely to be successful, because all the participants have an individual interest. The implication of this for the teacher in research need not, I am sure, be spelt out in any greater detail.

Conclusion

I have argued above that teachers do not play as active a part in research as they might and that there would be substantial benefits to teachers and research alike if this situation were changed. I do not intend at this stage, if for no other reason than that I have developed the arguments elsewhere[10, 11], to put forward an alternative pragmatic model for research design which might involve teachers. Suffice perhaps us to say that in the collaborative research mode in which our projects have operated in the Council[12], we have attempted to look on the teacher as an equal contributing research colleague operating within the limitations presented by the system in which we are working.

However, it must be made clear that in putting forward these arguments, I am not advocating the dismissal of existing research specialists in favour of a new inspired teaching force. Nor indeed am I arguing that collaborative research with teachers is the optimum methodology for all educational enquiry. The Edinburgh Centre for Educational Sociology[13] has been remarkably successful in developing and using an educational data base for collaborative research and in our own programme in school-based assessment we will continue to develop the approach having evaluated its potential over the last two years in small scale feasibility studies. But in an objective analysis of the use of corporal punishment, or the awareness of opportunity for school-leavers for example, there may be a strong case for the passive involvement of teachers.

What I am arguing however, is first that teachers themselves should be willing to take a research perspective on their own practice and second, that where appropriate, researchers should seriously design their work to allow the active participation of teachers at all stages.[14] In this, the local education authorities, the teaching unions and the research institutions all have an important role to play in persuading teachers that, like their Scottish predecessors in the first 30 years or so of the Council's work, their effort will be worthwhile. Perhaps most important of all, it is for national research organisations like ourselves to liaise with colleges and universities to set up the infrastructure of professional collaborative involvement from researchers which will allow the teacher to instigate the research himself.

NOTE:

The writer would like to acknowledge the contributions made by his colleagues in the development of the ideas put forward in this paper, particularly those of Dr W B Dockrell, Director of SCRE.

REFERENCES

1 SCRE Diagnostic Assessment in Secondary Schools Phase I 1977-78, Principal Researchers: Dockrell, W B & Black, H D, funded by the Scottish Education Department.
2 STENHOUSE, L, 1978, Applying Research to Education, paper given at the BERA Conference, Leeds.
3 EISNER, E W, 1978, Symbol Systems and their Potential for Educational Research, paper given at the AERA Conference, San Francisco.
4 STENHOUSE, L, op cit.
5 HOYLE, E, 1970, Planned Organisational Change in Education, Research in Education, 3.
6 STENHOUSE, L, op cit.
7 & 8 GLASER, B G & STRAUSS, A L, 1967, The Discovery of Grounded Theory, Aldine, Chicago.
9 CHIN, R, 1960, Problems and Prospects of Applied Research quoted in Hoyle, op cit.
10 BLACK, H D, 1978, Collaborative Research—the Diagnostic Assessment Project in SCRE 50th Anniversary Booklet, Edinburgh.
11 BLACK, H D and De LUCA, C, 1978, Collaborative Research from Both Sides of the Same Fence, SERA Autumn Conference, St Andrews.
12 Diagnostic Assessment Project (SED funded) and School-based Assessment in the Affective Domain Project (SSRC funded).
13 Collaborative Research Programme, Edinburgh Centre for Educational Sociology.
14 Ideas from E Spencer of SCRE, contributed to this thinking.

A LIST OF RESEARCHES IN EDUCATION AND EDUCATIONAL PSYCHOLOGY

presented for degrees in Scottish Universities
1978

Offprints of this list may be obtained on application to
The Scottish Council for Research in Education

THE THESES ARE ARRANGED ALPHABETICALLY UNDER THE FOLLOWING HEADINGS:

Adjustment and Delinquency
Administration
Adult Education
Comparative Education
Curriculum (including individual subjects)
Further Education
Guidance, Educational & Vocational
Higher Education
History of Education
Intellectual and Conscious Mental Processes
(including Memory and Learning, Concept Formation, and Perceptual Processes)
Intra-family Relationships
Language
Literacy
Nursery School
Personality Traits and Determinants
Primary School
Psychology—(a) Abnormal & Clinical
(b) Adolescents
(c) Child
Pupil: Attitudes and behaviour
Reading
Rural Education
School Design
Secondary Education
Sociology
Special Education—(a) Cultural Minorities
(b) Handicapped
(c) Pupils with Learning Difficulties
Teachers and Teacher Training
Teaching Methods and Teaching Aids
Tests and Examinations
Theories, Principles and Philosophy
Women, Education of

ADJUSTMENT AND DELINQUENCY

(1) **Buist, M** Dropping out and dropping in: a study of some truants and experimental provision for them
MEd, Dundee

(2) **Clapperton, J R** Role Playing and Smoking MEd, Edinburgh

(3) **Dunn, Cecily** Some relevant psychological facts that could distinguish the "stable" from the "maladjusted" child
MEd, Glasgow

(4) **O'Connor, Lawrence** The delinquent's perception of delinquent behaviour: a comparison of "open" and "secure" unit delinquent groups in terms of the cause, treatment and effects of delinquent involvement MAppSci, Glasgow

(5) **Sheridan, Peter** Maladjustment and the attribution of responsibility, blame and punishment in secondary school-children MEd, Glasgow

(6) **Wilson, Mark** A correlational field study of the relationship between delinquency, aggression, and preference for violent and exciting television content MA, Glasgow

(7) **Wolff, Martyn** Behaviour maladjustment in emotionally deprived delinquent girls MA, Glasgow

See also
Johnston, Hope (43)

ADMINISTRATION

(8) **Hetzer, A H** Teachers' associations, educational finance, negotiations and remuneration of teachers in Scotland and Connecticut MSc, Edinburgh

ADULT EDUCATION

(9) **Aranguiz, L** The involvement of volunteers in adult literacy schemes in the Lothian Region
DipCommunity Ed, Edinburgh

(10) **Crole, R** Adult education in Scotland, 1949-1968
MSc, Edinburgh

(11) **Duthie, W** Developments in Building Education and Training in Scotland in relation to lifelong learning
MEd, Edinburgh

(12) **Facey, T** An analysis of the increased popularity of Yoga in adult education DipCommunity Ed, Edinburgh

SCRE EXHIBITION — On display at Dunfermline College of Physical Education, March, 1979.

(13) **Guerrero, A** Lifelong education and its perspectives in Latin America with special reference to the Peruvian Educational Reform DipCommunity Ed, Edinburgh

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